Appl. No. : **10/606,001**
Filed : **June 24, 2003**

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Currently amended) A precursor film stack for use in the production of MEMS devices, the precursor film stack comprising:

a carrier substrate;

an optical compensation layer formed over ~~on~~ the carrier substrate, the optical compensation layer comprising a material of a finite extinction coefficient;

a first layer formed on the optical compensation layer;

a second layer of an insulator material formed over ~~on~~ the first layer; and

a third layer of a sacrificial material formed on the second layer.

5. (Original) The stack of claim 4, wherein the first, the second and the third layers are formed using a deposition technique.

6. (Previously presented) The stack of claim 4, wherein the first layer ~~is of~~ comprises a conductive material selected from the group comprising a single metal, a conductive oxide, a fluoride, a silicide, and a conductive polymer.

7. (Previously presented) The stack of claim 4, wherein the insulator material is selected from the group comprising an oxide, a polymer, a fluoride, a ceramic and a nitride.

8. (Original) The stack of claim 4, wherein the sacrificial material is etchable using a Xenon difluoride gas.

9. (Previously presented) The stack of claim 4, wherein the sacrificial material is selected from the group comprising silicon, molybdenum, and tungsten.

10. (Cancelled)

Appl. No. : 10/606,001
Filed : June 24, 2003

11. (Currently amended) The stack of claim 4, wherein the optical compensation layer comprises a material comprising at least one of the following: Zirconia~~,~~ and Hafnia~~, an oxide, a nitride, and a fluoride~~.

12. (Previously presented) The stack of claim 4, wherein the first layer comprises a plurality of sublayers, at least some of the sublayers comprising a conductive material.

13. (Original) The stack of claim 12, wherein the sublayer furthest from the carrier substrate is non-conductive and defines an optical layer.

14. (Original) The stack of claim 4, further comprising an optical layer deposited between the second and third layers.

15. (Original) The stack of claim 4, wherein the third layer comprises at least two sublayers, each sublayer alternating with the other, wherein each sublayer can be etched by the same release etchant, but has a different etch chemistry so that the sublayers define etch stops for each other.

16. (Previously presented) The stack of claim 15, wherein the third layer comprises a sublayer of molybdenum that alternates with a sublayer of silicon.

17. (Previously presented) A precursor film stack for use in the production of MEMS devices, the precursor film stack comprising:

a carrier substrate;

a first layer formed on the carrier substrate, the first layer comprising a plurality of sublayers, wherein at least one of the sublayers comprises a conductive material;

a second layer of an insulator material formed on the first layer; and

a third layer of a sacrificial material formed on the second layer.

18. (Previously presented) The stack of claim 17, wherein the sublayer furthest from the carrier substrate is non-conductive and defines an optical layer.

19. (Previously presented) A precursor film stack for use in the production of MEMS devices, the precursor film stack comprising:

a carrier substrate;

a first layer formed on the carrier substrate;

a second layer comprising an insulator material formed on the first layer; and

a third layer comprising a sacrificial material formed on the second layer, wherein the third layer comprises at least two sublayers, each sublayer alternating with the other, wherein each sublayer is etched by the same release etchant, but has a different etch chemistry from the other, wherein the sublayers define etch stops for each other.

20. (Previously presented) The stack of claim 19, wherein the third layer comprises a sublayer of molybdenum that alternates with a sublayer of silicon.

21. (New) The stack of claim 4, wherein the optical compensation layer comprises a material comprising at least one of the following: an oxide, a nitride, and a fluoride.

22. (New) A method of making a precursor film stack for use in the production of MEMS devices, the method comprising:

providing a substrate;

forming an optical compensation layer over the substrate, the optical compensation layer comprising a material of a finite extinction coefficient;

forming a first layer on the optical compensation layer;

forming a second layer of an insulator material over the first layer; and

forming a third layer of a sacrificial material on the second layer.

23. (New) The method of claim 22, wherein the first layer comprises a conductive material comprising at least one of the following: a single metal, a conductive oxide, a fluoride, a silicide, or a conductive polymer.

24. (New) The method of claim 22, wherein the first layer comprises a plurality of sublayers, at least one of the sublayers comprising a conductive material.

25. (New) The method of claim 24, wherein the sublayer furthest from the substrate comprises a non-conductive material and defines an optical layer.

26. (New) The method of claim 22, further comprising depositing an optical layer between the second and third layers.

27. (New) The method of claim 22, wherein the third layer comprises at least two sublayers, each sublayer alternating with the other to define etch stops for each other.

Appl. No. : 10/606,001
Filed : June 24, 2003

28. (New) The method of claim 27, wherein the third layer comprises a sublayer of molybdenum that alternates with a sublayer of silicon.

29. (New) The method of claim 22, wherein the optical compensation layer comprises a material comprising at least one of the following: Zirconia and Hafnia.

30. (New) The method of claim 22, wherein the optical compensation layer comprises a material comprising at least one of the following: an oxide, a nitride, and a fluoride.

31. (New) The stack of claim 4, wherein the first layer comprises at least one of Chromium, Tungsten, and Molybdenum.

32. (New) The stack of claim 4, wherein the first layer comprises at least one of indium tin oxide (ITO), zinc oxide (ZnO), and titanium nitride (TiN).

33. (New) The stack of claim 14, wherein the optical layer comprises a substantially non-conductive material.